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## **CHOST**

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TOM ORZECHOWSKI SUSIE LEE



Mits Eclary

Multi Hold 

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This book collects issues one through eight of the



It is the near future. The world has become highly information-intensive, with a vast corporate network covering the planet, electrons and light pulsing through it. But the nation-state and ethnic groups still survive.

And on the edge of Asia, in a strange corporate conglomerate-state called "Japan"...

























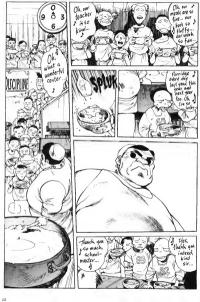














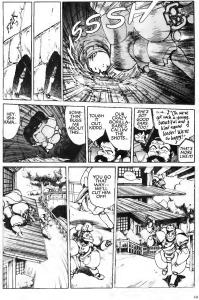


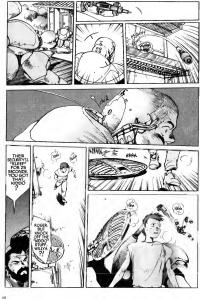


























































































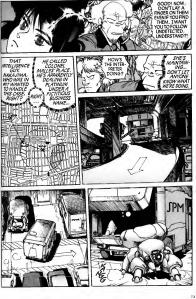






















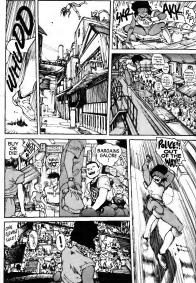






































## MEGATECH MACHINE 1 FEYOLT OF THE FOROTS

The robots collectively referred to as "Fuchkoma" are a single "AI" (artificial intelligence) Starting in the morning, or upon commencing a job, different Fuchkoma units have different

experiences, resulting in individual differences among units. At night, or after a job is completed, however, all units have their memories (or records ofesternalstimus indisalunit conditions, actions, thoughts etc.) networked and data linked. so that by the next morning (or when the next job is performed) their memories are all unified. In terms of equipment, the Fuchikoma units do possess a certain amount of individuality but this individuality is unrelated to the uniformity of their Al (thank you). Batou is unique among team members in that he likes to use a particular Surbikoma unit as his own. This guirk of his has no particular significance, however....



ANY















AND SO, THIRTY-TWO HOURS LATER.









HUMANS, THEY
WOULDN'T BE
#080TS, THEY'D
BE HUMANS!
THE DNLY THING
DIFFERENT
WOULD BE
THEIR EXTERNAL
APPEARANCE!

FORTY

FORTY

PROPERTY

LISTEN, IF IT

TO CREATE

WERE POSSIBLE

ROBOTS THAT































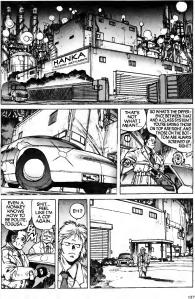
















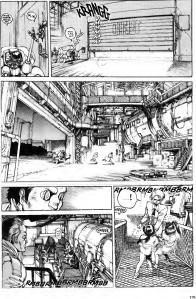




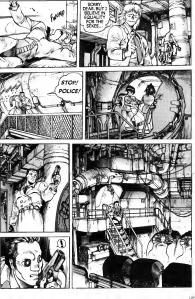














































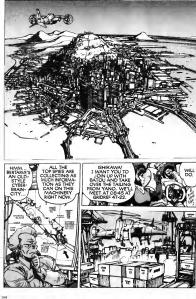












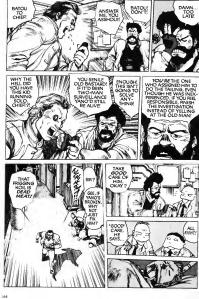










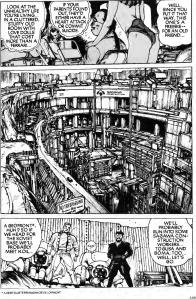
















































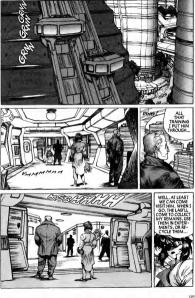




















































































































































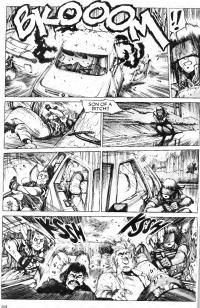








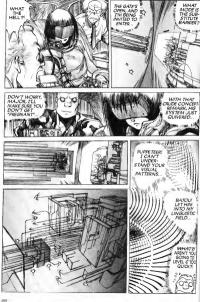












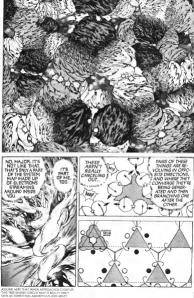


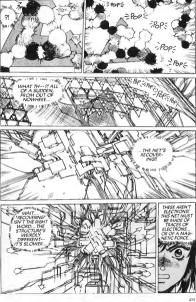












































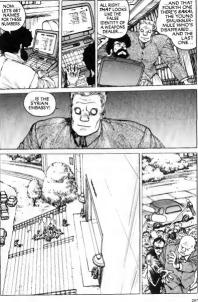


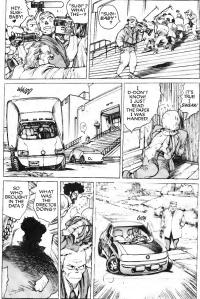






































































## GHOST COAST

18.9.2030

I HAVE TA TELL YA!? NO-ONE-IS-FOLLOWING-US!



LET'S SWITCH EHICLES ONE MORE TIME BEFORE WE HIT THE SAFE HOUSE.

32







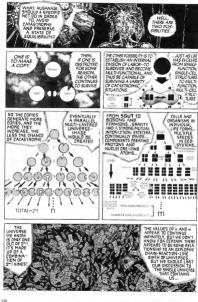




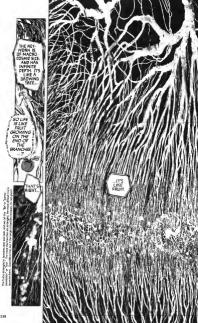
















KABBALA, THE NOISE
AND CHINESE MYTHS,
THE TREE OF KNOWLEDGE
IN EDEN, THE WORLD FE
LIFE, THE WORLD TREE
THESE ARE ALL WORTHY
OF SEING CALLED
AMENDMINES SHIRM,
OR "THE PILLAN
OF HEAVEN."

ATSIEM UP THE
UNIVERSE THAT
CHANNELERS--IN
IN EVERY ERA,
CULTURE, AND
EVERY RACE OF
PEOPLE--HAVE
TRADITIONALLY
ACCESSED...



























Japan on November 23, 1961. Sharow studied drawing and oil pentiting at the Ossaka University of Art. While there, he wrote and draw has first published comic, Black Megac, for farzine Alba.

Danny those years, he creeked Applessed, the first volume of which was published in 1986 by Seathership Dominion followed in 1996 That same year, Applement won the Galaxy Award optimalant to the US Hugo — for best estensofiction comic. Shrow continued to release volumes of Applessed at regular intervals, until the publication of the fourth volume in 1989.

In 1968, Statho Proteus released the Englatlanguage transistion of Appleseed, which immediately became one of the best-selling manga ever published in the U.S. English vestors of Dominion and Black Magic met with similar success. Since then, Shirow's work her been published workdwde, in nine languages.

After assisting in the direction and character design of the fileck Magic M-66 animaton video, Shurow went to work on Ghost in the Shall file the first episode appeared in 1990, in Kodanshalm Koung Magname Kazasiculan About this sub-position or was made into an extremely successful animated video series now venalable in English.

released all four volumes of Appleseed, which won the SPJA Anime Award for best translated mange Appleseed, Dominson, Black Magro, and the Appleseed Databook are now published by Dark Horse Comics

After writing and drawing several new episodese of Appleseed, Silvive deciséet to take a haitsus from producing the sense he considera bis "fair's work". The head also been working, for Paisam Publishing, on the Neurobard enties, a 'balle for a shared world' which, when complete, will serve as o hisspirit other creations cent follow to make world' which, when complete, will serve as owned when the creation seem follow to make world silvive has created. In 1646, Shitow released Dominion Conflict of through his long-time publisher Selbstonska.

Nevember 1995 will see publication of the first Japanese epsode of the second Ohost in the Shell sense and the worldwide release of the multimiliondollar Ohost in the Shell animeted-feature movie, directed by the award-warning Mamoru Oskin.

An extremely private individual — 'Masamura Shiraw' is a pseudonym — the man who is Shiraw has never appeared in public or allowed humself to be photographed as Shiraw He lives in Hyogo, Jopan, following the loss of his house in the 1995 Kobe earthquike, engoye reading, and losens

numerous spiders as pets







## ISSUE #4 COVER









## **AUTHOR'S NOTES**

Pg. 17 Hacter a computer criminal who infiltrates other cybarbinina, steels information, manipulates date and programs, plants viruses, and otherwise corrupts them. The penalty for genus hacters who can infiltrate aphotes (scules or psychoe) is particularly basels.

When you copy a page of something the onginal doesn't discover, and in the same way information isn't really lost when it's "stolen" in this story. The only way you can really know it's stolen is by detecting when en transport contact is taking place - and it's hard to tell if it's really improper or not - or when there is some indication that others have the information (this requires an assumption) Strice those who stole it will - obviously pretend they didn't and will manipulate the deta, information wars become extraordinarily difficult. There can be multiple rulers existing simultaneously in the cyberbrein world, and their power is determined by the number of "keys" they have to access each network and by their ability to break through defensive barners. The problem is the creat number of code issue, or barner-breaking ability, and the information processing power, not the size of the database. There's no use having a buce amount of information, if it's always being controlled the network can still be gut off whenever desired Ideally, one exerts the necessary controls at the necessary times in a wey that it won't be discovered. In order to be able to respond to changes in information. rather than concentrating it at one location, it's also better to decentralize and redistribute it. That also means if there's an eccident or disester, damage will be kept to a minimum In other words, the pervous system of a cyberbrain person is his or her own individual Pg. 27

Instruction Brogarding the extrema function of the form for Brogarding the extrema function of the form one thing people (or white most better be called "spaced" were expensively explained uses a type of "chaemelage" that allowed these to expenditures with the external unwesse and make consists with the internal unwesse and photometers. But produces were the allowed completely internal tools are almost completely internal tools are almost completely internal tools are almost completely internal tools are when they run a "timentalitie" (sperkessa synch, they can easily many experimentalities of positions for the people trail is about the mentally disturbed or inharphene person heaving. "broadcasts" or "voices," it might be related to this phenomenon )

Pp. 36 Mont types of authoral blood being commissions are white motion, and/ords in merear seames factors have white blood in my story browner, in view of the authoral feet, and cangaretern influence. The given my endoud and baptiment influence, The given my endoud and blood white en zon component. The Journal that the zerunchape are seeking in. By the ways, in zustain and fabout part vistals ballood that a manaly produced that the zerunchape are seeking in. By the ways, in zustain and bodied part visitals ballood that when the production apparently more firm of stancily and the building that the to the "Edocations have not all the production apparently more firm of stancily and the building that the Day "Edocations have not all the productions are presented in the production of the product

and I've based this is a special mechanism to

ensure that foreign substances in the blood

never directly attack the brain

Regarding Batou's lines on page 36 Personally. I think all things in nature bave "chosts" This is a form of pantheism, and similar to ideas found in Shinto or emono believers in the Memtou Because of the complexity and function, and the physical constnuits they have when they appear as a physical phenomenon, it may be impossible to scientifically prove this There are after all. humans who act more like robots than robots. end one cennot say for cartein that they have no obosts just because they don't ect like it. In ancient times, neither air nor the Universe were believed to exact Just for reference. I should state that not all ohosts are the same in terms of complexity or effect

Again contently his no "Manistry of Insternal Affirms". The policy on Japon are heading with a state minister and o fire-member National Public Selety Commission (including the public Selety). Commission (including the minister) in Chost in the Shelt, policies seed; conclusing and because I have the way the British of United Selety of Insternal Affirms Manistry of Insternal Affirms Manistry of Insternal Affirms and Charles and Charles

.60 Government departments in Jagen genesisly start disswing up their rough bridget requests for the next year in Aged (If a smokler way of asying "gettime inner"). The end of August is the Ministry of Finance of deadline At the end of the year, the Ministry of Finances their presents a seround budget in the Gleisset and

aboves it is each ministry and spency. This is, no other vertice the ministry's request to "hide the line is synosis." Upon accepting that the head bockloss, on up is war ministry. In the contract the head bockloss, on up is war ministry on the contract receives whatever amount they one lovely head of process and conjecture for choosing of process and conjecture for choosing present for the lovely head of the contract the line of the		universated the countries if is exposed to be setting at will possibly just be spinning to wheele (Of mouse, the sun-passed countries are well-set). Of mouse, the sun-passed countries are contributed to the countries of a motion, but the less thank of a motion. Due of the estimates for a motion. Due of the estimates for the state of the stat
was all of them unduding Mayer Sammag- leve in more than one glace downstrow, apartments, suburban condox, company bussage, horsi room, are Design that cyberDean contact, they've turned diff their connection to the outside selected in oneth or to differ the contact of their contact of their connection to the outside selected in oneth or their contact of their contact of their contact of their contact of their contact of their contact they can still establish direct contact.	Pg 61	The 'pushead' referred to is, as one tright assume, the sholing to his the head of a put 50% of the time For a short-benned guin 100 yants a probably the limit. I think this shootes would allowed have to be a permit, but I used that figure because I don't think' it's completely impressible Of course, it's important to semember that tence shirk a cybicg, one can indirect completely gross PEE (Freesam root)
Pg. 57 The focusing mustures a coferences to "E" ranking — "6 for need and 1 for difficulty" — is something I made up (fir's such an installing way of putting it, normally. Fin near the mustake would just say they'ge a tury country not worth wortying about.) The profrusions above and below the helicontex news new sees.		energy] Also the score a obtained with a high mutalle-velocity gun that uses ultra-small sablest amministic One of the setting points of the Selvino is that it doesn't jam, even when a cyberg's polling the togger, fining 12 rounds in time seconds
colters. Just to clearly was causes an one a taxy one recent waspett. Dira've been council for some time and the sease of an equal to a possible of the collection of the coll	Pg 62	Restleves don't need to be loaded one carridge as a time, some how spend bades market the eliber leading six at a time. Some one of the control of the contr
Pg 58 'ODA' refers to the Official Development Assistance, or Resign Aud Ministry (This is the papeline apears, the noise we wash weed used out takes more efficiently). The foreign immater's commends about the ODA as probably a better way of lioking at the situation, rather than set thinking of a situation.	Pg. 63	"Al" stands for arthrois intelligence Tass is a field of research in computer science that scudes not just housenesshed information processing, but sinclingent functions I think of it as a knowledge/information processing deeces that is not human Thot is arthrois Experts hold a wanety of openions on this
"invasion using economic power instead of weapons" As long as the ODA fails to properly	Pg. 67	Contegious medical waste, or brohazardous garbage, is often poorly handled and will

Pa 73	become a merge problem in the finitus filed only as the associated conts entergonness. But everythe ment the associated conts entergonness in the remains may start using some of the discussion of the discussion of the control of the discussion of	Pg. 39	Als with promitate indicate profess probably leaves to experience houses personal design, the days and honor, the control for a single profession of the pro
Fg. 73	Major Kuranga probably phinks it was e- mutake to have head-hunted hum from potice headquarters She believes the ability to suff- out commal activity by intuition cannot be acquired through training or expensions. She calls this "ghow-whospering" and likens it to the abilities possessed by schizophirence or channelers.	Pg 100	In tooking at a book on beam death, it appears that whether a ghost attaches itself to a body or not a determined pertity by the estrukes of the centures and the lower part of the thalams Generally speaking, what we refer to as the "spint" or "soul" is a very vegue concept, including things programmed into, or closely related to the depicted of the spinst of soul of the spinst of the spinst lower spinsted on the spinsted to th
Pg. 84	In webly, might usually makes right, but these on those who, in rescion to the bleak rasing, bodown in the opposite sheal that might below in the opposite sheal that might below in the opposite sheal that might advantage that the opposite sheal that might be shown that the opposite sheal that might be shown that the opposite sheal might be opposite shear that the opposite shear is sufficient to the opposite shear that the opposite shear the opposite shear th	Pg. 102	the mostle of chemical resolution, and emotions, etc.  The suse them is selly no need to nose that, but the smoote of customachines in the solution. The suse them is selly no need to nose that, but the smoote of customachines in the solution, the smoote of customachines in the solution of customachines. The customachines is the contraction of the customachines. These are different types of mustimachines. These are different types of mustimachines there is no the customachine them is not the customachine the cus
Pg. 98	White is ignit reasonable to a system and a service this makes the whole concept of light or wrong seem rather amtiquated if a consensus of the impacts is all it to lease to determine what is night, then having and controlling information becomes extraordinarily important.  A probot is a system — this includes computers — wherein a specific input of instruction.		Changing the ratio of micromachines makes it possible to make a particular some micromachines makes a particular some micromachines make a particular some micromachines in particular some micromachines in particular some micromachines make a particular some micromachines make a particular some micromachines m
	insults in a specific cupil, or performance in Some school, by themselves "one documents and perform multiple tools to a certain source of the second	Pg 103	These montmachines are a lovetype create using express posts a louderage objects a freedom's description of the freedom's description freedom's description of the freedom's description of the louder operation of commercial formation of the freedom's subsection of country of formation of the freedom's subsection of country of freedom's description of the freedom'

	mechanical system is made of situa- opportunent enterior unionatalia con har- contaminate if the epowerf to expense. In contaminate in the expense of the expense of the contaminate in the expense of the expense of the social "Custom model" here explain models have been all produce to the expense models and with a practical design consult by a de- dengine everything from the shape of the embounce compensation to the automation contaminate in the expense of the expense of drough imbiliations, intensities with growing arms and an expense of the expense of th	house, and distalling observers in manufacture of the european estimate was been as the property of the control of the larger of the beautiful to the presence of the presence of the presence of the presence presents, hunter bother, and proper indicated by a control of the presence special property of cold creates eries. Format special property of cold creates eries. Format special property of cold creates eries. Format special property of cold creates about the register of the presence of the present special word — the principle of property extraors. The cheest's executively provide control of the present of completely district of the present of the present of the present present the present of the present present the present of the present present the present present the present present the present present the present present the present present present the present
	to ensemble the Major Kusanaga has sociately obtained it's clear that these settemen are menufacturing products of extremely high procuraon, but it's impossible to desemine if the procuraon is the result of the 16 We can assume, however, that they are using mirromachines over more advanced than those on the open market. The women, therefore, don't have to worry that someone.	busses-his god speaks to the channels of the a special ghase that we call 'god' merely spri- with the channels's language held, bytes familiars, set:  Fig. 119 in the fatures, perhaps such advanced, his precision motors (shorts all andreids) would in really be discassed so easily But only a fe- wars and, who would have believed that of.
Pg. 106	well find out what they're doing.  What do total cybrigh self? I imagine that mittally, cybrigh consuced small quantitates of a paser-bie substance or palls, but —partly late a partly late and the story, they are shown enting synthetic flood such as shown above with a marmal appearance and real sensetion," including a spearance or cell ensemble, including the self-partly self	office and andowloop organization or nor relation and andowloop organization or normal frequencies of the state true humanized robots will become on propriet if they were mismateded, and the state of
	neurothips (Or let's assume so.) Publishmes man't none bar-mbots however.	Pg. 121 Thichophyton and Claviceps are names of fun; For those who want to know more, refer to W
	The use of the E-bram space or various reality, but a 9.0 video sport Choice Exercise on a platform like a house non-vasion as platform like a house non-vasion as platform. Into a none-shaped none suppression of which it educated to the constantion of which it is deputable. He's suspensed by a forme-shaped none security assumed by a forme-shaped none security assumed to the whole, repress the small Others would not see the view be done Golf manufatom using a similar both much crude posterple sentit nodey.  **One file is more precover them all the stam in	Gray's The Pelenoscoping of Pago to Nima. Affairs Three's no deep supplications in our these nations but they were convenient in solling a story with intel Grayer demonstrated order to large up in the part working. Aliquent coder to large up in the part working of coder to large up in the part working. Aliquent coder to large up in the part of the part
Pg 115	"One life is more precious than all the stains in the heavens," or so the saying goes, but it's just a noble sentiment in reekity a planet is worth far more than even a race of beings, anduding	Pg. 125 For readers who demand realism, I should no that a cyborg such as the Hanke possiblent— mester-slave, duebatic heart-mind type—

probably would not horizon properly as to solve the an artist of the distribution common to the control of the control of the control braness are controlly tought to distribute between the bedy eath the maid, but we need to the control of the control of the need as the control of the control of the need as the control of the control of the and thus a part of the control of the control and the control of the control of the control that indicated. "It is possible to mechanic part of the system life human looply, and removed, depart from the interaction removed, depart from the removed, depart from the interaction of the removed of the control of the control of the control of the removed of the control of the control of the control of the removed of the control of the control of the control of the removed of the control of the control of the control of the removed of the control of the control of the control of the removed of the control of the control of the control of the removed of the control of the control of the control of the removed of the control of the control of the control of the removed of the control of the control of the control of the removed of the control of the control of the control of the removed of the control of the control of the control of the removed of the control of the control of th	them, but fair down at the Seek! I be seek.  "Georgie' in Lakes from A. B. van Worts  scannon-detions soot." The What of Milkes  scannon-detions soot. The What of Milkes  scannon-detions soot. The What of Milkes  scannon-detions soot. The What of What of  scannon-detions soot. The What of What of  scannon-detions soot. The What of  scannon-detions soot. The Seek of  scannon-detions soot. The Seek of  scannon-detions soot. The Seek of  scannon-detions soot.  Seek of the Seek of the Seek of  the Seek of the Seek of  soot. The Seek of the Seek of  soot. The Seek of the Seek of  soot. The Seek of  s
Pp. 128 Thouse to treat youth to this builder, as we all latine, and with first manifest them count, in the contract of the contract performance, and manifest whereign of course As a result. I've differentially woulded showing builders strike after indicating the sound Grower that way I've chron the rifle in this section, it wouldn't seally matter. I approximately a recommendation of the approximate is a recommendation of the country of the supposed on the book two or their country and would have it they part seats that bottoms of the building losses.	destin plantary name at the father of the story is destiny plantary should only be considered on a case-by-case beam, and their it's not right is to large all those who common cames under the Plantamization, but if so worry about group on many advantages to the preparation of crames Pethops proprie destill be sentenced to death activation. Benefitting society are carriers by promotif.  19. 145 Powerston the courter I personnel.
Pg. 132. The man's words in panel 7 howe no paracular maning. He's just trying to get Sistor's ettention, and while some people might understand him, the main thing he's trying to convey is hostish? Since it words it may be a type of incentation. He's assumed that Sistor and Togues eep police from the way Togues yelled 'Piecee' at him.	seeing the following on the new cone a setal till eller enteriority of each in the Drazed States field to and was captimed in Christia. Which has no death penalty in Christia, which has no death penalty in Christia, which has stems of the man to the U.S. incoming that he would probably be secured. Learning of this, several highly seastic sensit likes— seene of whose extrame bodies had not been found — wenched that truly certified returned on the sensition of th
Pp. 137 in moves cores of apocal forces makeng moker assemble, one of their sens several people with guina drawn changing down a hallway They'd have to be really "special" finites to do so bale had in reshry they usually peok acound a currier finite and then, depending on the situation, make that move (file they'd in 165 and Silence of the Lambol) in the old days, they probably used a dental number of smoothing. The most	the death pentally "I don't know the upthot of that particulate case, but cleedy, coultied metans with most respect for human nights are believed by commands so whet they wouldn't even suppose in a comic book. Whatever happened to "came and punsishment"?  Pg 143 Regarding ordnance and equipment in this seconine if it being portify managed and
important thing is to make sure you have the advantage before the energy spots you and to not just start blasting away. The seal firing should be done as support or when moving	developed by multiple coepocations. Individuals and units see simply not capable of handling the guns prostbetic bodies, manufacturing petts requiring special meterials, doing replacements and maintenance, and
Pg 138 Normally, I have the sort of expository lines used in the second panel and try to avoid using	maintaining the equipment in the ultra-clean plants that are secured

Pg 150	The gun has a catch, about two castimates: above the eyetion port, that throws the catchinges forward, but for night had eyetion, is ought to be possible to design a little catch, nowhere near as log as a locies; that would soutter them downward (What? You don't think that's a good idea?)	centing a disconetting sense of scale For instances, 1,221 meters of Mt Bettses of Mt services are completely blocked from twee by the buildings in the disseming on this page the mountain is sendered at situated 4,500 meters above sea level with the metropolis spawing 11-12 kinometers out on either side. Ct something like that
Pg 151	We won't go not detail here about the fact that is a new-host reconsist-next was done the fact and in a new-host reconsist next was desired. No wedness of host received was found, host in an of cital' does not guarantee that none contrast, it meally means that operations conjuting, with an added discense conjuting, with an added discense to increasing the fact of the conjugate of the configuration of the configuration of the configuration of the sund-best not discense to the sundocration is given high priority when componend	Fig 194 'hancis family was notabled only their he had that on cassang' or was mercy federased'. Plenshes are never tall the delatin or the trust of when where are how enabled on At least this the holy removedness undercorn all that time the holy removedness undercorn all that time. These are also turnes when deletase are exposed purculationly, before a confirmance has been made and the presson in extually all lens And. and the presson is extually all lens And. And the second of the presson is extually all lens And. And the second of the presson is extually all lens And.
		Pg 195 in distributed systems origineering, there's
Pg. 154	Mathuselah is a name from the Bible and has the connotation of someone who is laved a very long time. It's not the Soviet wemanis name. "Comrade" already sounds old-fasboned, but I decided to leave it in anyway.	apparently no concept of 'redundancy' in a group 'To remove the old mucconachinas — it's say one has to mject 'C' parts — sevence the adsorption, make them totate, apply a cammingal force of 5 x 10° dynafcell to step them off, and then suck them out with
Pg. 156	As far as the Northern Islands are concerned, it would be great if both the Japanese people who used to live there and the Soviets who live there now could somehow operat But when it comes down to an eitherfor squaton, each side	a magnet (Oeven the blood-brain barrier, it's probably not a good idea to try to run them into the bloodstream and expel them that way)
	always claims Instorned proceders and exchange over received Japen one assert its column to the sitends all it weets, but the assertion with one you do less per early set, a gesture if only we could use all the energy expended on a regular on indiancy a new solution? Do we easily need to defend our regions to the pear of improng the energe Sonte Union? I know Gothy's in an unstable position and county self-yelf-weet per control of the solution. Do we have been considered to county self-yelf-weet positions and solve the situation. But head the Source as taken to come from the sense Gotter in taking to come from the sense Gotter in the self-weet and the se	Pg. 2020 of cooses, in melity our pare would have been bested to a compe end felt without bear citables, or size, but I don't show this become it weight make theirs to conditioning better on. To the edge of the door, outpit seats to the Magni- to better and The added a plantoon that's hadness by the II show or it a screamly supposed to be near to the door without part ends that the still deservit make up for it, but hely the men!
	this commentary was written in 1989.)	Pg. 204 Armored surt. A type of bullet-resistant, fire-
Pg. 158	For the moment, furger that with non-MSRO measures implemented — "HERD" or Shareds of Electromagnetic Reladation to Celebrace, refers to the damage that EMF on cause to electromagnetic both the habitopsis and Fuchionin would have been sentitled to muraal month, the stock barner mode would have been activated to provect eyelenteam, habiton, and the man sentitles would also have	resentant sun, completely covering the body and consenting of an external shell of compound materials and four battery-powered limbs for locomonous that minus human movements using master-slave technology Although intered to by different names, owing dangerous and impractical toys of a similar nature have been developed of late.  Pp. 200 This is a prestry classed way to avoid being
	been out Also the Bertraye cityscape is composed of sicyscapers two information high.	tailed, but it probably wouldn't work for true pros. Normally, a 24-hour tail requires

constraints management to propose the call constraints. In the same contention is made as made to the content of the call the call the same in made out of the most three or from the call the call the call the call the same proposed or covering enter and or the read which the suppress enter and or the read which the suppress enter and or the course of a repromote to propose as course of a repromote to propose as course of a repromote to the budget on point call on the content of the budget of suppress of the course of the proposed course of the proposed or course of the course of the course of the course of the course of the course of the course of the course of the course of the course of course way to get acount aims of these colors way to get acount aims of these colors and the course of the course of the course of the cour	Areans for, on the Disside Sides Them is no look junction do not a Agreement probability by the probability of the probability
ory, efter FN manufactured advanced P90 seepons; these shells were developed for andgues and submachine guns HV bullets e small celiber, providing low secoil and high intertation power, but they don't have very	probably have to use force to stop the perpension ideally, that should happen before not after the map takes place Sad, but true Pg. 239 In the hour and a ball before the modent was
ay go nght through them Sance these bullets e vary affective ageinst bulletproof weets ght armor cyborgs, etc., in Ghost in the Shell ay're fairly common but generally not salable to crulium The Sebuso" finerums-our	asponed, assume that a thorough attempt wer made to desect operator input errors, but that it wasn't possible to turn the power off because of delivery schedules and the need to protect the substitudy
ecces carry use HV shells: Armound weeponry, ce the think-tank that appears been is eccessary to go up against HV shells	Pg. 242 The "soul" that Batou is referring to bere reposeer to effectly simple collection of energy or releasely low-level spiritual structure — what I would have referred to as a "low harmono."
why a total option can confession be sent of obj. June II is partial object with mechanical year limited testing in the wood of probability come and the properties of the properties of the test of the test inclusion with a principal control properties of the properties with a principal control testing of the properties of the pr	hee" in finer — as grouped to itser jeffort, which as the Johne level group to matched to send on the medium of the control of
byfreed, what looks like a bandage or a towel actually a collagen seal designed to stop the oeding We'll protend here that it's the sume	then the enter structure appears to have a mester-slave/top-down control aspect to it, but one suspects that the set of selection itself is what yields the materialistic conclusions to which needs often one if concentrated
	extendation, it takes evertify intensing. If some them is present the present of the present the prese

Pg 245	thought creates meters molecules chemical composition, or apparatus, and apparatus, the option than the chemical composition of the composition of	Pg. 271	we refer to specific "indirectable," were not effective to these features to these restriction to the selection to the selection to the selection to the control body. A "ghost" in this case refers to the select of the control to the control of "phases" paid not to a bundle of enemy; in the adjust called a "brane", "although it may be a place caused by enemy." In the selection of the place caused by sensing in our story, the "efficient of an intermediate that the proposition than the selection to an intermediate approach level of midmentation than the selection to an intermediate approach level of "life". "The "completely, which," and consider a place called "life".
	a good example		satustion, even the spirit that we think of as the "self" (a "phase" of the system, perheps"), may
Pg 252	It gets hander to tail in the zein becomes of decreased visibility, but optical comouffage becomes exaser to desort (septically when moving at high speeds). Optic-cam taking is a trademark of 9-8 listou is following two cars behind this target our		actually change mode, from thought or physical self, to a level where it is being influenced or controlled by a guardian deity, a protectionate spirit, or an original apinit, so if we're talking about infante free holoss in both lower and upper levels, then inner space and outer space continue of infantium Shinto alex
Pg 266	Cyberbrain spece and cyberspace are often depicted on glowing, three-dimensional graphs This is on easy-to-understand representation, but I think cyberbrain spece consists of something for more conceptual.		considers things in terms of three steges — the shimusubi or conscious self, the taramusubi or unconscious self, and the tamazumentusubi or the self that transcends self.
	constitute beyond and sussessed to our vasual and solido senses Corcuss, n'in all night to use audio-visual representations, but the subdio-visual representations, but the conversacion sense intellinent and silimately metalogiales Afler all, there is no form; consuming the control of the cyclesters would And Desider, we're faiting about something that downs' mere faiting about something that downs' however the control of the cyclesters would And Section for the faithful and the first human senses for on replacements and that meanings are provided in 2011, it's fine to imagine what it would be like	Pg. 272	Just as one centrol see the legical of the entire vascular system with c mitter-dedectope floating in the middle of a ceptilety. More Reasonage is unable to see the execut smoope distance in these periods allow one of the seed of the control of t
Pg. 267	For those wanting to know more about saccredes, etc., in the than a book spenifically on biology I recommand an interesting week titled Sensors and the Eyes of Living Things, edited by Kayaco Shuman and published by the Information Survey Association, 1995. This		In a cybechram network, distance and specific locations cen almost be agraced, especially when the hardware is wired The more I try to visualize it, the more this type of dispotion loses meaning, I suppose
	the innormation survey Association. 1945 I am book — which I've recommended before — describe not how we see things with our eyes, but how we "see" light information that comes through our eyes with our beauss (Ness than book is presently only available in Japansse)	Pg. 273	Some readers may think that in Arama's should first use Batro and their cult for outside help misseed of the other way around. For the saise of claim, let me explain I thought that if Megir Rizsanagi were in trouble, and Batro did a brain dive using the same method and technology and barries expressing whose he deschools are considerated in the same method and
Pg. 269	I draw the final penel the wey I did just to make it easier to understand. The core memory is by no means the core of the pupperson be is the total system isself. Generally speaking, when		using his own barner this time, he'd only run into the same popolem. In this story, the winness and losers are not determined by guts and passon but on a digital level by the

	'system' and the voltage There's no reel struggle or contest, a spint-second flow determines the winner.	-/-	here e huge role in issues of abortion, blood transfusions, bio-meet for consumption, and the use of fetures end the deed for bio parts
Pg 275	In this case, the electrons and the magnetic force that Mayor Kusanag, is selecting to have the same electronship as patterns, and beckgrounds of I resize that Kusanagi's he about "electron traces" is a little unclear, but it's just her way of onying it.	Pg. 284	Susanaga's skull as made with a triamum shell, and she has a large number of prostrictus enhancements, so she really does have to worry shout surking. But not all tyboops smix— some models are designed to floot with special foam-based materials.
Pg. 277	The Puppeteer has discovered that at each ten- the relationship between quenta creates e phase. This is also a discovery of self. The self as part of the whole," used to consist of a relationship such as "the complex structure of	Pg 286	¥3 does not refer to a submanne but to e cyborg in the shape of one, covered with muscle tassue on both sides, extending back to e tail
	natural things $\leftrightarrow$ a pert of nature," but now phases such as somety, corporations, and the state are also powerful Most religious have	Pg. 291	Gertex is a coined term It's a Czech- menufactured plastic explosive (PE) second in popularity only to Semiex. A teel beedache for
	anthropomorphized the upper level of the system they believe in, and thus think of it es a sort of lord over the decision-making process but like the relationship between the mind and the loody this is not really a higher-level		security, it can't be detected by sensors at surports, yet only 10 outness of it can blow a 747 to similarments. Gentex does not exist in the seal world.
	control It should be thought of as a phase (mode) of the totality	Pg 296	Use of stretegic, nuclear weepons is referred to es "H (high) I.C." traditional warfers is referred to as "M (middle) I.C." and conflicts
Pg. 281	Whet do you think are the top three events in history? In the context of the story, Major Kusanaga is thinking of the discovery of fire.		savelying low levels of destruction are seferred to as being "L I C " $$
	electronics, or electronicy, and the creetion of life I realize these are kind of vegue? I know that some people would probably hat the wheel, computers nuclear energy, or writing language, or deeth, which is a bag one All are		There are examples of this type of exchange in the British Paulisment, but in Jepen, with its shedowy back-room politics, it seems highly improbable
	important. In my way of thinking, fire differentiated man from spee, and electronics includes information processing by computers	Pg 298	If you're confused this is Kusanai's Section. One boyinend from chapter eight
	I can understand why some people would leave out physical tools, but not including lenguage and writing systems (and symbols), end expecially death? Weil	Pg. 301	MOSSAD is the world-femous Israelismellagence agency which — in the ere of this story — has gone a little soft.
		Pg. 312	Japan used to have e jury system, but it was
Pg. 282	The fact that I have a lot of religious references in my comes recently — Chos is another example — her nothing to do with the popularity of new religious so Japan I include the reference because I think that as somety ages and enters on on whether high-rich and religious problems on increasingly make the problems on increasingly.		supended, not abolished, in 1945. November 1, 1990 as the one-hundredth anniversary of Japen's modern judicine system. In secont years, these has been a movement to reconsider the use of jury trails and other forms of citizen participation in the logal system.
	intertwined — issues regarding beam death and the environment — expansived religion is one of our buggest obstacles. At the stert of the twenty-first century, around the time a savior is	Pg. 327	Kusanaga and Batou s car is obviously not from Public Security's vehicle department. Nor is it one of meny they've hidden throughout the city. They're samply driving a stolen car.
	prophesied to return, I believe the fusion of science and religion is going to be one of the most critical issues fecing us. Religion will		They've samoved the plates and replaced them with their own, and these plates are looped wersions of VIP numbers that they've

Pg. 330	researched. It is one of young Betor's clever brits ideas. He figures that if any problems occur, it'll at least make the authorities bestate before responding.  Meyor Kusenagi is worined about the vehicles in panel three because she can't impeame multiple.	enters the middle region, the newer and more complex the system becomes Please view it as boming in the realism of "human size" in other words from the level of complexity, it's inswitchis that the more and macco worlds resemble each other
	points ratice because one clear climoptice discipule through because of the calculate and carrying off everything they raid on flock additions to the time dead threes, that this addition is the time dead threes, the time course three all everything possibility that their course three alloweys the possibility that their was only those there who came one foot and really did plan to carry out the loot, but smoe- thy we doed, she doesn't have to worry about that situation.	Pg. 337 I've seed comercione that in the vary datant factors after 10" executed have elapsed, the particular and total to be a second to the elapsed testing and the particular and the elapse the elapse seed to the elapse that the elapse the elapse the meeting such prophessible things as the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse that the elapse tha
Pg. 331	Plineis four and five show a screw-activated switch, the type used in bomb cessings. But in this ear, the system is electionically activated with only a half-turn because shape-memory alloy were is used As a result, the essent wey to dispose of bombs is to cover them with a intansium shell and blow them up.	Pg 340 I m sure everyone is aware of the theory of the voxf-like rature of the galaxy, but the idea of rotating inverses is princistly a product of my own wind imagination. My reference to "moment" may be a completely inappropriate and still saniogy, but who knows what times is really like anyway? In the second point.
Pg. 332	It's not clear in this story whishes the extual metal body was corroded when the mold attacked the aluminum alloy costing, but when Betou sees the mold-covered mechanism he says, Mold? On an aluminum compound?" Given the secting, it may be the seaks of a micromischine—in this case a microorbinal.	terms of a signal 1 think thet complete homogeneity would sepresent death True randomness is something machines are actually better at than humans, so a "bussed- randomness" in and of itself may be a characteristic of lafe.
	robot — weepon, but I for one custainly hope that such a weapon is never manufactured. (How irresponsible of me to believe this without basis)	Pg 341 For an interesting definition of life, I seconimend von Neumann's ideas as described in 'An Information Theory Definition of Life' in chepter 11 of the book by William Psundations titled The Recursive Universe Commic
Pg 334	In penel five, Batou is not trying to hode in a locker. He's entered a secret passageway though en opening despursed see locker fin realing there's a loage doct right under the locker, so they we really just carried a hole in the duct and closed and locked off the other entrances.	Complexity and the Limits of Sowntife Knowledge Contemporary Books. In P. I say descriptions of everything from deed bodies to closus, but — what the bock — I wouldn't know how to classify an old man with dements who's familied his genetic replication Unless somebody can define belong, it seems to me this cognit issuinglants.
Pg 336	Concerning the feesocamp pyramid indicated with patients (yangamens) this is a chagasan of a system, so it spaces the actual numbers at each different level. As with powers of ten, in terms of size, the progression would be functionable constructions in human size in	will make this problem spinitually impossible to resolve. But if self-replacetion can be considered slif-form their methigenes should be, too. The seal problem is that "life" is a such an unseperithic world.
	heavenly body sizel, but in terms of structural complexity it would instead be inscrinciple constructions — beavenly body size — human sizel, which is also the order in which they were setually created in this sense, in the third panel on the next page the more one	Pg. 343 The "altreed-species/pides" that the Pupperser is referring to probably includes the stack and play" that he would gain as a result of incorposeting Kasanegn "Glides" has no specific meaning here. I know it's not ideal for this situation.





## <u>GHOST</u>



